

LEUSHIN, A.I., dotsent, kand.tekhn.nauk

Distribution of electric current in the three dimensional
model of a furnace metal bath. Izv.vys.ucheb.zav.; energ.
3 no.5:70-79 My '60. (MIRA 13:6)

1. Kuybyshevskiy industrial'nyy institut imeni V.V.Kuybysheva.
Predstavlena kafedroy teoreticheskoy i obshchey elektrotekhniki.
(Metallurgical furnaces--Models)

34137
S/149/62/000/001/002/009
A006/A101

1.1710(2408)
AUTHOR: Leushin, A. I.

TITLE:

Electromagnetic mixing of molten aluminum in a furnace . . .
Tsvetnaya metallurgiya,

PERIODICAL: Izvestiya vusshikh uchebnykh zavedeniy, no. 1, 1962, 94 - 100

TEXT: Information is given on results of experimental investigations of the electromagnetic effect on molten Al in a 50 to 250 kg furnace with 40x60x50 cm internal melting space, chrome-magnesite roasted brick lining and a stainless steel shell. The investigation was made by 3 methods: 1) with the aid of an external magnetic field and pool current, the electrodes being placed on the vault and the lateral walls of the furnace; 2) the induction method with the aid of an external magnetic field produced by a coil with an iron core; 3) and a coil without an iron core. The experiments showed that the effect of an electromagnetic field on the molten metal brings about its motion in the direction desired. Regularities of the motion of the molten metal depend on the furnace shape and the inductor type. Most efficient results were obtained with the use of the induction method and a coil without an iron core. For the electromagnetic mixing of

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Electromagnetic mixing of molten aluminum...

light alloys with a thin slag layer the mixing rate should not be over 20 mm/sec and the specific mixing power 115 kw/ton. If the other conditions are equal, the velocity of the metal motion is directly proportional to the current intensity or the square root from the apparent power of the mixer inductor. The use of a-c of conventional voltage and frequency, and simplicity are the basic advantages of the method. There are 4 figures.

ASSOCIATION: Kuybyshevskiy industrial'nyy institut (Kuybyshev Industrial Institute)
Kafedra teoreticheskoy i obshchey elektrotekhniki (The Department of Theoretical and General Electrical Engineering)

SUBMITTED: April 4, 1961

Card 2/2

LEUSHIN, A.I., kand.tekhn.nauk, dotsent

Study of current distribution in a tub containing molten metal.
Elektrichestvo no.4:50-54 Ap '62. (MIRA 15:5)

1. Kuybyshevskiy industrial'nyy institut imeni Kuybysheva.
(Electric furnaces)

L 12237-63

BDS

S/271/63/000/004/033/045

47

AUTHOR: Leushin, A. I.TITLE: Experimental determination of the accuracy of modeling with use of
volumner grid electrical modelsPERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya
tekhnika, no. 4, 1963, 16, abstract 4B80 (Dokl. 4-y Mezhvuz. konfer-
entsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otras-
lyakh tekhn. Sb. I; Moscow, 1961, 323-332)

TEXT: In replacing a continuous distribution with a discrete one, a certain systematic error is introduced. The author estimates the accuracy of modeling with the help of volumner quadrangular grids. The grid unit depends upon the geometrical dimensions of the object and of the model. The accuracy of modeling is higher in proportion as the density of the grid increases. In constructing a grid region, its contour is so chosen that it is the best possible approximation of the contour under study. For an experimental test of the accuracy of modeling, the modeled region must be described twice, but with different grid units. Since the error varies in proportion to the square of the grid unit, it can be estimated on the basis of the difference of the two solutions. The author experimentally determined the

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L 12237-63

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Experimental determination

accuracy of modeling with a volumnar electric model of oval form. He measured the distribution of current in the model for various units (10 and 20 cm). The technique of measuring is described. G. R.

[Abstracter's note: Complete translation]

Card 2/2

LEUSHIN, A.I., kand. tekhn. nauk

Electrodynamic rotation of molten aluminum in a crystalizer.
(MIRA 17:8)

Elektrotehnika 35 no.6:50 Je '64.

ACCESSION NR: AT4042302

8/0000/63/003/000/0256/0262

AUTHOR: Leushin, A. I.

TITLE: The theory of thorough electromagnetic mixing of high-temperature melts in large-capacity furnaces

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady* soveshchaniya, v. 3. Riga, Izd-vo AN Latv SSR, 1963, 255-262

TOPIC TAGS: furnace mixing, electromagnetic furnace, electromagnetic mixing, high temperature melt, aluminum production

ABSTRACT: The article deals with the nature of liquid matter and the internal structure of high-temperature melts. The author first discusses the so-called mean coordination number, which establishes the relation between the crystal structure and the chemical composition of the substance. The effect of the high temperature of metal melts in furnaces on the change in the internal structure of the melts is then analyzed. In order to determine the degree of homogeneity of the chemical composition of an aluminum melt in a 30-ton furnace (with vat measurements of 1 x 4 x 6 meters), metal samples were taken from various points of the vat. The results of a chemical and spectral analysis of the

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ACCESSION NR: AT4042302

composition in percentages is given in the article. The data showed that no significant change in the chemical composition of the aluminum melt occurs throughout the entire volume of the vat. This constancy of chemical composition is analyzed from the point of view of electron theory (the structural analogy of atoms in solid and liquid metal). Relaxation and diffusion-related factors are considered in this connection, and the probability process as a mathematical abstraction of the real process of melt mixing, occurring in time and under the control of probability laws, is analyzed. Regarding the process of mixing two or more component particles from the qualitative point of view, when they pass through the thickness of the melt, a formula is obtained for the "material balance" (or the equation for the conservation of the substance). In general, expressions are developed which provide a correct description not only of the ideal, but also of the real mixing processes, provided that the mixture is not removed from the vat. The problem of achieving uniformity in the heating of the entire volume of the melt is also considered. The author determined the temperature field pattern of a metal melt in the vat of a high-capacity furnace, on the basis of measurements made in an industrial aluminum smelting furnace. It was found that the temperature field of the melted metal vat is unstable, changing from melt to melt, and varying over the entire volume of the vat. The electromagnetic method

S/058/61/000/010/047/100
A001/A101

24,7900

AUTHORS: Al'tshuler, S.A., Leushin, A.M., Morocha, A.K.

TITLE: On the theory of spin-lattice interaction in ionic crystals containing Cr^{3+} and Ni^{2+}

PERIODICAL: Referativnyy zhurnal Fizika, no. 10, 1961, 164, abstract 10V362 (V sb. "Paramagnitn. rezonans", Kazan', Kazansk. un-t, 1960, 57-62)

TEXT: The authors calculate probabilities of relaxation transitions A between spin levels of Cr^{3+} and Ni^{2+} ions. Calculating formulae are derived for both the case of low temperatures, when spin-lattice interaction is brought about on account of direct processes; and for the case of high temperatures, when the processes of Raman scattering of phonons play the main role. Probabilities A are calculated by means of the operator of spin-lattice interaction which includes all normal coordinates of the octahedral complex, being linear in this operator; the part of this operator depending on normal coordinates in the quadratic way, has not been taken into account.

V. Avvakumov

[Abstracter's note: Complete translation]

Card 1/1

S/181/61/003/005/022/042
B136/B201

24,7900 (1163, 1395, 1482)

AUTHORS: Al'tshuler, S. A., Bashkirov, Sh., and Leushin, A. M.

TITLE: Theory of acoustic paramagnetic resonance in crystals containing ions of the iron group

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1501-1504

TEXT: The authors have calculated the coefficient of resonance absorption σ of ultrasonics in crystals; in which the paramagnetic ion of the iron group is surrounded by the octahedron of the nearest diamagnetic particles. If the spin Hamiltonian for the paramagnetic ions is known, σ may be calculated for transitions between spin levels and for an arbitrarily oriented magnetic field using methods of the paramagnetic spin-lattice relaxation theory. For $S > 1/2$, the quadratic spin operator F enters the formula for the said coefficient: $\sigma_{\alpha\beta} = P q \nu^2 \langle \alpha | F^2 | \beta \rangle^2$, where α and β are the spin levels between which a transition takes place; P is given by

$$P = \frac{9\pi^2 N}{kT \omega_{ph}^2} \left(\frac{\sigma'}{R^2} \right)^2 \left(\frac{P^2}{R^2} \right)^2. \quad (2)$$

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S/181/61/003/005/022/042
B136/B201

Theory of acoustic ...

N is the number of paramagnetic centers per unit volume, d is the crystal density, v and ν are the velocity and frequency of ultrasonics, R is the equilibrium distance between the paramagnetic ion and its diamagnetic neighbors (charge e'), $\overline{r^2}$ is the mean square distance of the 3d electron from the nucleus; q is a structure constant, and $\nu_{1/2}$ is the resonance-absorption-line width.
$$F = \sum_{i,k=x,y,z} \frac{1}{r_{ik}^3} \hat{S}_i \hat{S}_k \quad (4)$$
 is valid here.

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Theory of acoustic ...

Ni^{2+} in a tetragonal field

$$a_{zz} = -a_{yy} = 3(\lambda_z \Phi_z - \lambda_x \Phi_x),$$

$$a_{xx} = 3(\lambda_x \Phi_x + \lambda_y \Phi_y - 2\lambda_z \Phi_z),$$

$$a_{xy} = a_{yx} = -\frac{16}{35}(\lambda_x \Phi_y + \lambda_y \Phi_x),$$

$$a_{zz} = a_{xx} = -\frac{16}{35}(\lambda_x \Phi_x + \lambda_y \Phi_y),$$

$$a_{yy} = a_{xx} = -\frac{16}{35}(\lambda_x \Phi_x + \lambda_y \Phi_y),$$

Cr^{3+} in a trigonal field

$$a_{zz} = -a_{yy} = \lambda_z \Phi_z - \lambda_x \Phi_x + 0.54(\lambda_x \Phi_x + \lambda_y \Phi_y - \lambda_z \Phi_z),$$

$$a_{xx} = 4.62(\lambda_x \Phi_x + \lambda_y \Phi_y - 2\lambda_z \Phi_z),$$

$$a_{xy} = a_{yx} = -\lambda_x \Phi_y - \lambda_y \Phi_x + 3.08(\lambda_x \Phi_x + \lambda_y \Phi_y) - 0.54(\lambda_x \Phi_x + \lambda_y \Phi_y + \lambda_z \Phi_z),$$

$$a_{zz} = a_{xx} = \lambda_z \Phi_z - \lambda_x \Phi_x + 0.54(\lambda_x \Phi_x + \lambda_y \Phi_y) - 3.54(\lambda_x \Phi_x + \lambda_y \Phi_y),$$

$$a_{yy} = a_{xx} = -\lambda_x \Phi_x + \lambda_y \Phi_y - 0.54(\lambda_x \Phi_x + \lambda_y \Phi_y) + 3.54(\lambda_x \Phi_x + \lambda_y \Phi_y).$$

(4)

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B136/B201

Theory of acoustic ...

If, however, $S = 1/2$ (Ti^{3+} , Cu^{2+} , etc.) the operator $\hat{P}$ may be used to express the absorption coefficient as a linear function of the spin components. Estimations of S for these two cases are given in Tables 1 and 2. The striking difference between the values is, however, not so remarkable when considering how strongly the spin-lattice relaxation times differ for different ions. Calculations are performed for ideal crystals. The defects which are always present in the practice, require that sound waves scattered by the defects be taken into account. If the sound-wave amplitude is independent of the frequency, lattice vibrations caused by the scattered waves will depend on the spin system to a much greater extent than do vibrations caused by plane waves. This has been shown by Kochelaev (Ref. 3: DAN USSR, 131, 1053, 1960). If $S = 1/2$, α will become independent of frequency; if, however, $S = 1/2, \alpha \sim \omega^2$. An experimental verification have to be based upon the following considerations: If it is conducted at a low temperature, at which the spin-lattice relaxation can be explained by single-phonon processes, it will not be possible to measure the absolute value of the absorption for ultrasonics, because the saturation factor depends upon the ratio of the transition probability between spin levels under the action of ultrasonics to the probability of a relaxation transition.

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S/181/61/003/005/022/042

B136/B202

Theory of acoustic ...

tion which is caused by thermal vibrations of the lattice. Instead, it is possible to clarify the dependence of resonance absorption on direction and polarization of sound waves and the magnetic field strength. There are 2 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The most recent reference to English-language publication reads as follows: H. Van Vleck, Phys. Rev., 57, 426, 1940.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

SUBMITTED: October 21, 1960

Card 5/7

30397

S/053/61/075/003/002/005
B125/B104

Paramagnetic sound absorption

to English-language publications read as follows: M. Menes, D. I. Bolef, J. Phys. Chem. Solids 19, 79 (1961); C. Kittel, Phys. Rev. Lett. 6, 449 (1961); E. B. Tucker, Phys. Rev. Lett. 6, 547 (1961).

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Card 3/3

24.7900

S/181/62/004/006/028/051
B104/B112

AUTHOR: Leushin, A. M.

TITLE: Acoustic paramagnetic resonance in crystals with ions in the S-state

PERIODICAL: Fizika tverdogo tela, v. 4, no. 6, 1962, 1564 -1572

TEXT: An investigation is made of the paramagnetic resonance in cubic crystals containing ions of the iron group in the S-state. It is shown that the dominant mechanism of absorption of acoustic energy is the modulation of the orbital motion of the electrons by lattice vibrations, the modulation acting through the spin-spin interaction of the electrons on the total spin of a paramagnetic ion. This leads to a reorientation of the total spin with respect to the external magnetic field. The spin-phonon interaction operator is found to be a quadratic function of the spin components. Hence, the selection rule for transitions under acoustic influence has a quadrupole nature. After deriving the matrix elements of the spin-spin and orbit-lattice interactions the following formula is obtained for the sound absorption coefficient:

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45350
S/181/63/005/002/036/051
B102/B186

247900

AUTHOR: Leushin, A. M.

TITLE: Theory of paramagnetic spin-lattice relaxation in crystals with ions in the S-state. Single-phonon processes

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 605 - 615

TEXT: The author develops a theory of paramagnetic spin-lattice relaxation of magnetically rarefied crystals with Mn^{2+} or Fe^{3+} ions in the S-state (cf. R. D. Mattuck, M. W. P. Strandberg, Phys. Rev. 119, 1204, 1960). The paramagnetic ion is assumed to be placed in the center of a cubic or octahedral cell formed by its nearest diamagnetic neighbors, relaxation taking place via single-phonon processes. Lattice defects, and the effects of covalency and electron cloud overlapping are neglected. The lattice field potential is assumed to be weak as compared with the free-ion field but stronger than the electron spin-orbital and spin-spin energies. The considerations, valid only for atomic crystals are based on the Hamiltonian $\mathcal{H} = \mathcal{H}_0 + \mathcal{H}_{latt} + V + P$, where $\mathcal{H}_0$ is the Hamiltonian of the free ion including all spin-independent

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S/181/63/005/002/036/051
B102/B186

Theory of paramagnetic ...

interactions, $\mathcal{V}$ the ion energy in the lattice field and P the interaction energy operator; the expressions for $\mathcal{K}_{latt}$ and P are taken from PTT, 4, 1964, 1962. It can be shown that relaxation and paramagnetic resonance absorption of sound are mainly determined by modulations of the electron shell of the paramagnetic ion and spin-spin interactions of its electrons. For the Q and $\mathcal{V}$ components, $\mathcal{V}$ being expanded as $\mathcal{V} = \mathcal{V}_0 + \sum_P \mathcal{V}_P Q_P + \sum_{P,Q} W_{PQ} Q_P Q_Q + \dots$, ex-

plicit expressions are obtained; in the case of a cubic cell these expressions are linear combinations of the displacements of the particles from their equilibrium positions. The results of the theory are confronted with experimental data on pressure-induced e.p.r. line shifts, acoustic paramagnetic resonance of MgO with interstitial Mn^{2+} and Fe^{3+} ions, and low-temperature measurements of the Mn^{2+} relaxation time in SrS crystals. M. Blume and R. Orbach (Phys. Rev. 127, 1587, 1962), who also have studied the relaxation of ions in the S-state, have explained the relaxation by spin-orbital interaction. Since their values obtained for the τ_r constants are wrong in sign, the present author assumes that his relaxation mechanism

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S/181/63/005/002/036/051
B102/B186

Theory of paramagnetic ...

(spin-spin interaction) is the right one. There is 1 figure.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

SUBMITTED: September 24, 1962

Card 3/3

AID Nr 967-16 15 May

8/181/63/005/003/022/046

THEORY OF PARAMAGNETIC (Cont'd)

of resonance lines. Lack of evidence of Raman scattering of phonons in acoustical paramagnetic resonance experiments with static deformation of the crystal is explained as caused by the single-phonon nature of resonant paramagnetic absorption of sound. Electron paramagnetic resonance experiments with deformation of crystals can show Raman effects in principle, but require interpretation of nonlinear regions of the complex relationships of EPR shifts to applied stresses. [BB]

Card 2/2

LEUSHIN, A.M.

Splitting of the ground states of Mn^{2+} and Fe^{3+} ions in low-symmetry crystal fields. Fiz. tver. tela 5 no.8:2352-2358 Ag '63.
(MIRA 16:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.
(Wave mechanics) (Crystallography)

LEUSHIN, A.M.

On g-factors of ions in the S-state in crystals. Fiz. tver. tela 5 no.12:
3373-3377 D '63. (MIRA 17:2)

1. Kazanskiy gosudarstvennyy universitet imeni V.I.Ul'yanova-Lenina.

L 33168-66 EWT(1) AT

ACC NR: AR6016209

SOURCE CODE: UR/0058/65/000/011/DO49/DO49

AUTHOR: Leushin, A. M.

TITLE: On g-factors of ions in the S state in crystals

45
B

SOURCE: Ref. zh. Fizika, Abs. 11D378

REF SOURCE: Sb. Itog. nauchn. konferentsiya Kazansk. un-ta za 1963 g. Sekts.: paramagnitn. rezonansa, spektroskopii i fiz. polimerov, radiofiz., astron., bion. Kazan', 1964, 5-6

TOPIC TAGS: ion, cubic crystal, epr spectrum, spectral analysis, line splitting, free electron

ABSTRACT: In order to eliminate the difficulties arising in the theoretical explanation of experimentally observed g-factors of ions in the S state, the author undertook a detailed calculation of these factors using as an example ions of the iron group, situated in crystalline field of cubic symmetry. The calculations were made within the framework of the model of the crystalline field, and the latter was taken into account in parallel with the electrostatic interaction of the electrons. This made it possible to explain those values of the g-factors which are larger than the g-factor of the free electron. According to the existing theory of Watanabe, on the other hand, the g-factor should always be smaller than the g-factor of the free electron. [Translation of abstract]

SUB CODE: 20 /

LS

Card 1/1

L 29550-66 ENT(1) AT/GD

ACC NR: AT6014766

SOURCE CODE: UR/0000/64/000/000/0042/0077

AUTHOR: Leushin, A. M. 51
64

ORG: none

TITLE: Theory of Stark and Zeeman splitting of magnetic ions in *S*-states in crystals

SOURCE: Paramagnitnyy rezonans (Paramagnetic resonance); sbornik statey. Kazan, Izd-vo Kazanskogo univ., 1964, 42-77

TOPIC TAGS: crystal theory, Hamiltonian, Zeeman effect, Stark effect, line splitting, splitting operator

ABSTRACT: The principal mechanisms responsible for splitting of magnetic ions in the *S*-state in crystals are theoretically studied. The Hamiltonian method is used for describing Stark and Zeeman splitting of the *S*-state. Application of the proposed method is illustrated by setting up the spin Hamiltonian for $S=5/2$ in a crystal with cubic symmetry. The method proposed by Koster and Statz (G. F. Koster, H. Statz, *Phys. Rev.* 113, 445, 1959) for describing the behavior of a paramagnetic ion is discussed on the basis of this same example. A method is proposed for deriving a generalized spin Hamiltonian for Zeeman splitting which is applicable to all ions in the *S*-state and for any type of crystal field symmetry. The final results of this method are given for various types of ions in various crystal fields. The parameters of the

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L 29550-66

ACC NR: AT6014766

spin Hamiltonians are found for splitting of spin levels of ions in the iron group in crystal fields of cubic and lower symmetry as well as in an external magnetic field. Orig. art. has: 20 tables, 52 formulas.

SUB CODE: 20/

SUBM DATE: 04Jun64/

ORIG REF: 004/

OTH REF: 051

Card 2/2 *fv*

LEUSHIN, N.I.

Study on the causes of the discrepancy between atmospheric
location and weather conditions. Trudy GGO no.157:76-84 '67.
(MIRA 17:8)

LEUSHIN, N.I., kand. fiz.-matem. nauk

Numbers of lightnings in summer on the European territory
of the U.S.S.R. Meteor. i gidrol. no.9:22-28 S '64.
(MIRA 17:9)

1. Tsentral'nyy institut prognozov.

L 18861-66 EWT(1)/ECC GW
ACC NR: AP6011106

SOURCE CODE: UR/0050/65/000/012/0031/0034

AUTHOR: Leushin, N. I., (Candidate of physical-mathematical sciences);
Arbab'evskaya, L. N.

ORG: Central Institute of Forecasts (Tsentral'nyy institut prognozov)

TITLE: Number of lightning strokes in summer in the area covered by the Central Asiatic thunderstorm direction-finding network

SOURCE: Meteorologiya i gidrologiya, no. 12, 1965, 31-34

TOPIC TAGS: lightning, map, meteorology, storm

ABSTRACT: In Meteorologiya i Gidrologiya, No. 9, 1964, N. I. Leushin proposed that thunderstorm activity be characterized by lightning discharges, not by the number of days with thunderstorms. This is done on the basis of the direction-finding method. The mentioned article described in detail a method for conversion from the number of discharges recorded to the actual number of lightning strokes in the European USSR. The method is applied in this article to compilation of a map of the distribution of discharges in the summer season in the area covered by the Central Asiatic network. This network includes four stations: Aral, Ashkhabad, Karaganda and Tashkent, with the control point at Ashkhabad. The maps given here are based on data for the summers of 1962 and 1963; only six days were used for each month. The territory was bounded by the meridians 30 and 85°E and the parallels 25 and 65°N. This entire area was broken down into 5° grid squares. On the map the number of discharges is given

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UDC: 551.594.21

L 18861-66

ACC NR: AP6011106

in thousands per hundred square kilometers. The results are compared with other similar studies. Apparently thunderstorms in Western Siberia are accompanied by a lesser number of lightning strokes than thunderstorms in the European USSR. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 04 / SUBM DATE: 17Mar65 / ORIG REF: 001 / OTH REF: 002

Card 2/2 (44)

USSR/Medicine-Nervous System
Medicine-Vibration, Effect of

Oct 48

"Quantitative Evaluation of Human Sensitivity to
Vibrations," P. I. Leshin, Leningrad Sci Res Hygiene
and Sanitation Inst, 4 pp

"Gig 1 San" No 10

A vibration plane, with variable amplitudes and
frequencies as basic characteristics
of the vibration method, was constructed. Experiments
of the vibration principle of excitation. Operative
electromagnetic principle of excitation. Opera-
tional, determining the possible sensitivity of vibra-
tions, determining relative points of the perception
of vibration, compared with the logarithmic
dependence between physical magnitude of vibra-
tions and intensity of their perception. Gives
table and graph on vibrations.

49/19567

LESHIN, P. I.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

30419. Kineticheskiye Svedeniya Prozhivaniya i Smertelnosti Narodov Mirov. Zh. el.
Trudy (Akad. Naukbel. Khim.-In. Kazanskaya), 7, 1-2, 1979, S. 3-6

SO: Leticia's Journal, April 3 and 5, 1949

LEUSHIN, P. I.

20063 LEUSHIN, P. I. O. vliyanii zelenykh nasazhdeniy na rasprostraneniye ulichnogo
shuma Gigiyena i sanitariya, 1949, No. 6, s. 7-12.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

LEUSHIN, P. I.

Determination of the range of the protective zone around industrial and transport sources of vibration. Gig. sanit., Moskva no.6:7-11 June 1951. (GLML 21:1)

1. Of Leningrad Scientific-Research Sanitary-Hygienic Institute.

BRUSH, I. I.

Schools

Good acoustics in schools. Sig. 1 Jan. No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

1. LEUSHIN, P. I.
2. USSR (600)
4. Soundproofing
7. Soundproofing internal housing construction, Gig. i san., 17, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

1. The first of these is the fact that the United States has a long and proud history of supporting the people of the world in their struggle for freedom and independence. This policy has been a cornerstone of our foreign policy since the end of World War II.

LEUSHIN, P.I.; NIKITIN, M.Ya.

Distribution of trees and bushes within the city block in combatting street noise. Gig. 1 san. no.9:8-15 S '54. (MLRA 7:10)

1. Iz Leningradskogo nauchno-issledovatel'skogo sanitarno-gigiyenicheskogo instituta.

(NOISE,

control by distribution of trees in cities)

SHAFIR, A.I.; NIKITIN, M.Ya.; LEUSHIN, P.I.

Fitted case of instruments used for sanitary examination of living quarters in the praxis of a sanitary physician. Gig. i san. no.11: 40-43 N '54. (MLRA 7:12)

1. Is Leningradskogo nauchno-issledovatel'skogo sanitarno-gigiyenicheskogo instituta.

(SOCIAL HYGIENE

exam. of living quarters, carrying case for instruments)

(APPARATUS AND INSTRUMENTS

instruments for sanit. exam. of living quarters, carrying case)

LEUSHIN, P. I.

"Development of Measures to Insulate Against Liberation and Noise from Intrahome Units (Elevator, Boiler Rooms, Laundries)," paper presented at the Scientific Conference of the Leningrad Sanitation Institute, 8-10 May 1956.

U-3,054,017

LEUSHIN, P.I., starshiy nauchnyy sotrudnik

Vibration and noise characteristics of large-panel houses [with summary in English]. Gig. i san. 24 no.1:25-30 Ja '59.

(MIRA 12:2)

1. Iz Instituta radiatsionnoy gigiyeny Ministerstva zdravookhraneniya RSFSR.

(VIBRATIONS,

in large-panel houses (Rus))

(NOISE,

same)

(HOUSING,

noise & vibration in large-panel houses (Rus))

VAYNSHTEYN, P.R., kand.biologicheskikh nauk; LEUSHIN, P.I., kand.tekhn.nauk;
SHAFIR, A.I., doktor med.nauk

Physiohygienic principles of permissible levels of noise intensity
in multistory apartment houses. Gig. i san. 25 no.3:23-29 Mr '60.
(MIRA 14:5)

1. Iz Instituta radiatsionnoy gigiyeny Ministerstva zdravookhraneniya
RSFSR.

(NOISE)

(APARTMENT HOUSES--SANITATION)

LEUSHIN, S. G.: Master Agric Sci (diss) -- "Vitamin A (carotene) metabolism
and supplying cattle with it in Orenburg Oblast". Moscow, 1958. 17 pp
(All-Union Sci Res Inst of Animal Husbandry), 150 copies (KI, No 6, 1959, 138)

COUNTRY : USSR
 CATEGORY : Farm Animals.
 General Problems.
 ABS. JOUR. : RZhBiol., No. 6, 1959, No. 25774
 AUTHOR : Leushin, S. G.
 INST. : All-Union Scientific Research Institute of*
 TITLE : The A-Vitamin Value of Orenburgskaya Oblast Feeds.
 ORIG. PUB. : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1958, No 1 (5), 31-34
 ABSTRACT : No abstract.

CARD:

1/1

*Animal Husbandry.

11

CIA-RDP86-00513R000929430009-5"

ACC NR: AR6028753

SOURCE CODE: UR/0269/66/000/006/0033/0033

AUTHOR: Leushin, V. V.

TITLE: Quantitative analysis of the atmosphere

SOURCE: Ref. zh. Astronomiya, Abs. 6.51.276

REF SOURCE: Izv. Krymsk. astrofiz. observ., v. 34, 1965, 151-162

TOPIC TAGS: stellar astronomy, star, hot star

ABSTRACT: Physical conditions in the atmosphere of the peculiar star ϵ UMa (AOp V) are investigated by means of curves of growth and Balmer lines of hydrogen. The upper limit of electron pressure ($\lg P_e = 2.30$) was obtained from hydrogen lines, and the lower limit ($\lg P_e = 1.60$) from Fe I and Fe II lines. The acceleration of gravity ($\lg g = 3.5$) on the surface of the star was determined from profiles of H δ , H γ , H δ lines. The same quantity, determined from the ratio of mass to radius, was equal: $\lg g = 4.4$. Excitation (7520--9200 K) and ionization (7200--8700 K) temperatures were also determined. The content of chemical elements in the atmosphere of the star, except for C $_a$, does not differ from the average cosmic content within limits of errors. A shortage of C $_a$, best noticed when the brightness is minimum, was detected. Turbulent velocity v_1 was found to approach 1.5 m/sec. [Translation of abstract] Bibliography of 17 titles. A. Kolesov.

SUB CODE: 03

UDC: 523.801

Card 1/1

LEUSHINA I.K.

(3) 8
 Potentiometric titration with a ferri-ferrocyanide electrode. Determination of copper. I. I. Tordjovich and I. K. Leushina (Central Asia State Univ., Tashkent. *Zhur. Anal. Khim.* 8, 310-3 (1953).--In this method, Cu was complexed with NH_4OH and then titrated with $\text{K}_3\text{Fe}(\text{CN})_6$. To a CuSO_4 soln., add NH_4OH until turbidity disappears. Add a few drops of approx. 0.5M $\text{K}_3\text{Fe}(\text{CN})_6$ and titrate potentiometrically with a standard $\text{K}_3\text{Fe}(\text{CN})_6$ soln. The compn. of the ppt. did not correspond to $\text{Cu}_2\text{Fe}(\text{CN})_6$. The CuSO_4 : $\text{K}_3\text{Fe}(\text{CN})_6$ ratio was 2.043:2.147. In detg. Cu in Paris green quinquevalent As did not interfere, trivalent As interfered and had to be oxidized to the quinquevalent state with H_2O_2 . M. Hosh

LEUSHINA, L.I.

Potentials evoked by optic stimulation in different zones of the cerebral hemispheres of animals. Fiziol. zhur. 49 no.12:1400-1409 (MIRA 17:12) D '63.

1. Laboratoriya fiziologii zritel'nogo analizatora Instituta fiziologii im. I.P. Pavlova, AN SSSR, Leningrad.

PA 36/49753

USSR/Medicine - Muscles, Physiology
Medicine - Muscles, Contractions

Sep 48

"Tetanic and Tonic Muscular Fibers," Ye. K.
Zubkov, L. I. Leushina, Physiol Inst, Leningrad
State U, 4 pp

"Dok Ak Nauk SSSR" Vol LXII, No 3

Continues analysis of tonic contraction in
solitary fibers isolated from frog muscles. Graphs
show response of muscular fiber to direct irrita-
tion of induction current (0.2 and 0.5 V), response
fiber to direct current (0.2 and 0.4 V),
of tonic fiber to direct current

36/49753

USSR/Medicine - Muscles, Physiology (Contd) Sep 48

and response of tonic fiber to induction irrita-
tion repeated twice a second. Submitted by Acad
L. A. Orbell, 17 Jul 48.

LEUSHINA, L. I.

36/49753

USSR/Medicine - Frogs
Medicine - Cells, Physiology

Oct 48

"'Transition' Muscular Fibers," Ye. K. Zhukov, L. I. Leushina, L. Ap

"Dok Ak Nauk SSSR" Vol LXIII, No 1

Discovered large number of "transition" muscular fibers in the m. ileofibularis of a frog. These are responsible for intermediate forms of contraction between typical tetanic and tone contractions. One of these responds to irritation according to the "all-or-none" law, and in this respect corresponds to tetanic fibers. However, they differ from these fibers in many characteristics. Submitted by Acad L. A. Orbeli, 17 Jul 48.

PA 33/49T72

VERESHCHAGIN, S.M.; ZHUKOV, E.K.; LEVSHINA, L.I.

Role of parabiologic stimulation in tone contraction of the striated muscle. *Fiziol.sh.SSSR* 36 no.6:673-678 Nov-Dec 50. (CIAM 20:6)

1. Laboratory of Comparative Physiology of the Physiological Institute imeni A.A.Ukhtomskiy of Leningrad State University.

LEUSHINA, L. I.

USSR/ Medicine - Physiology

Card 1/1 : Pub. 22 - 45/49

Authors : Aleksandrov, S. N., and Leushina, L. I.

Title : Tonic reaction of relaxed muscular tissues of a frog to the effect of acetylcholine

Periodical : Dok. AN SSSR 98/4, 677-679, Oct. 1, 1954

Abstract : Patho-physiological data on the tonic reaction of relaxed muscular tissues of a frog to the effect of acetylcholine ($\text{CH}_3\text{CO.O.CH}_2\text{-CH}_2\text{.N(CH}_3)_3$) normally present in many parts of the body and having important physiological functions, are presented. Four USSR references (1947-1953). Graphs.

Institution : Medical Stomatological Institute, Leningrad

Presented by : Academician L. A. Orbeli, May 2, 1954

LEUSHINA, L. I.

USSR/ Medicine - Experimental Neurology

Card 1/1 Pub. 22 - 40/40

Authors : Glazer, V. D.; Gurevich, B. Kh.; and Leushina, L. I.

Title : Differences in the electrical activity of the brain of dogs with various types of higher nervous activity

Periodical : Dok. AN SSSR 99/3, 485-488, Nov 21, 1954

Abstract : Five dogs of definite typological characteristics were investigated to determine the differences in the electrical activity of their brain. The registration of the biotics was carried out on three zones of the dorsal surface of the cerebral cortex of one of the larger hemispheres - frontal, parietal and occipital. The results obtained are shown in electroencephalographs. Two USSR references (1951). Graphs.

Institution: Academy of Sciences USSR, The I. P. Pavlov Institute of Physiology

Presented by: Academician K. N. Bykov, June 28, 1954

LEUSHINA, L.I.

Seasonal changes in the motor apparatus in amphibians. *Fiziol. zhur.* 41 no.3:388-394 My-Je '55. (MLRA 8:8)

1.Kafedra biologii Meditsinskogo stomatologicheskogo instituta, Leningrad.

(MUSCLES, anatomy and histology,
seasonal changes in frogs)

(FROGS AND TOADS,
seasonal musc. changes)

LEUSHINA L I

USER/Physics - Biophysics

Card 1/1 Pub. 22 - 17/51

Authors : Leushina, L. I.

Title : On the role of eye movements in the evaluation of distances

Periodical : Dok. AN SSSR 101/5, 849-852, Apr. 11, 1955

Abstract : Experiments were conducted to determine the role played by the external muscles of the eye in judging distances. An analysis of the results is given. Two USSR references (1947). Tables; graphs.

Institution : Acad. of Sc., USSR, I. P. Pavlov's Institute of Physiology

Presented by : Academician K. M. Bykov, October 22, 1954

USSR/Human and Animal Physiology. Neuromuscular Physiology

T-11

Abs Jour : Ref Zhur- Biol., No 14, 1958, No 65602

Author : ~~Leushina L.I.~~

Inst : Leningrad State University

Title : Neurohumoral Mechanisms for the Seasonal Change-over in the Activity of the Musculature from Tetanus to Tonus

Orig Pub : Uch. zap. LGU, 1957, No 222, 74-86

Abstract : A suspension of pulverized frog pituitary in Ringer's solution was injected into the spinal lymphatic sacs of hibernating frogs (three pituitaries per frog). Ringer's solution alone was injected in to the control animals. After pituitary was injected into the frogs, a hugging reflex developed. In addition the chronaxie of the muscles was prolonged and their tension increased; this is characteristic for the natural spring change-over of the musculature. Consequently, the spring change-over in the musculature of amphibians results from hormonal factors.

Card : 1/2

LEUSHINA, L. I.

Role of ocular movements in the identification of form and distance
in a plane. Probl.fiziol.opt. 12:314-320 '58 (MIRA 11:6)

1. Laboratoriya fiziologii zritel'nogo analizatora Instituta
fiziologii im. I.P. Pavlova AN SSSR.
(EYE--MOVEMENTS)

GLEZER, V.D., GUREVICH, B.M., LEUSHINA, L.I.

Electrical responses of the parietal region in dogs to photic and
acoustic stimuli; chronic experiment [with summary in English].
Fiziol.shur. 44 no.9:820-828 S'58 (MIRA 11:12)

1. Laboratoriya fiziologii i ritel'nogo analizatora Instituta fiziologii
imeni I.P. Pavlova AN SSSR, Leningrad.
(CEREBRAL CORTEX, physical.

parietal responses to photic & acoustic stimuli (Rus))

KOK, Ye.P.; LEUSHINA, L.I.

State of the oculomotor system in disorders of spatial perception.
Zhur.nevr. i psikh. 59 no.11:1337-1349 '59. (MIRA 13:3)

1. Sektor nervnykh bolezney i laboratoriya fiziologii zhitel'nogo
analizatora Instituta fiziologii imeni I.P. Pavlova (dir. - akademik
K.M. Bykov [deceased]), Leningrad.
(SPACE PERCEPTION)
(OCULOMOTOR MUSCLES physiol.)
(OCULOMOTOR NERVE physiol.)

VINARSKAYA, Ye. N.; KOK, Ye.P.; LEUSHINA, L.I.; SHKLOVSKIY, V.M.

Local signs of occipitobasilar lesion: unstable gaze in the dark and its deviation to the side opposite the focus. Vop. neirokhir. 27 no.1:31-35 Ja-F '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut neyrokhirurgii imeni N.N.Burdenko AMN SSSR, Institut fiziologii imeni I.P.Pavlova AN SSSR, Klinicheskaya psichonevrologicheskaya bol'nitsa imeni I.N.Pavlova.

(NIGHT VISION) (BRAIN—DISEASES) (EYE—MOVEMENTS)

LEUSHINA, L.I.; KOK, Ye.P.

Contralateral demonstration of the system of regulation of gaze
in the inferior parietal region of the brain. Fiziol.zhur. 50
no.4:393-399 Ap '64. (MIRA 18:4)

1. Institut fiziologii imeni Pavlova AN SSSR, Leningrad i Nauchno-
issledovatel'skiy institut neyrokhirurgii imeni akademika N.N.
Burdenko AMN SSSR, Moskva.

LEUSHINA, L.I.

Evaluation of the position of light stimulant and the movements of the eye. Biofizika 10 no.1:130-136 '65.

(MIRA 18:5)

1. Institut fiziologii imeni Pavlova AN SSSR, Leningrad.

LEUSHINA, A.I.; VIKHAREVA, Ye.S.

Role of the inferior parietal region on the regulation of the gaze. Regulation of the saccadic movement of the eyes. Fiziol. zhur. 51 no.5:529-532 1965. (MIRA 18:6)

1. Institut fiziologii imeni Pavlova AN SSSR, Leningrad i Nauchno-issledovatel'skiy institut neyrokhirurgii imeni Burdenko AMN SSSR, Moskva.

LEUSHKIN, A.

Use collective farm means for speeding up construction of rural schools. Sel'stroi. 13 no.2:7 P '59. (MIRA 12:3)

1. Starshiy inshener Ministerstva prosveshcheniya RSFSR.
(Schoolhouses)

LEUSHKIN, A.

Plans for eight-year schools. Sel'.stoi. 14 no.8:27-28
Ag '59. (MIRA 12:12)

1. Starshiy inzhener upravleniya kapital'nogo stroitel'stva
Ministerstva prosveshcheniya RSFSR.
(Schoolhouses)

ADILKHODZHAYEV, A.A.; AKBAROV, A.; LEUSHKIN, A.I.

Study of the stability and deformability of embrasured panels
in skewing. Sbor. nauch. trud. NII po stroi. ASiA no.4:10-18
'63. (MIRA 17:8)

LEUSHKIN, B.^V, inshener.

Rubber lining for headframe pulleys. Mast. ugl. 3 no.6:21 Je '54.
(Coal mining machinery) (Pulleys) (MIRA 7:7)

LEUSHKIN, B.V., gornyy inzhener

Pneumatic locomotive mine haulage in Czechoslovak mines. Mekh.
trud. rab. 9 no.8:39-40 Ag'55. (MIRA 8:10)
(Czechoslovakia--Mine railroads) (Czechoslovakia--Locomotives)

LEUSHKIN, Boris Vasil'yevich; VAGANOV, A.N., otvetstvennyy redaktor;
KUDOMITSKY, A.D., redaktor izdatel'stva; IL'INSKAYA, G.M.,
tekhnicheskiiy redaktor

[Compressed air locomotive haulage in Czechoslovak mines] Vozdukhovoznaia otkatka na shakhtakh Chekhoslovakii. Moskva, Ugletekhizdat, 1956. 42 p. (MLRA 9:10)

(Czechoslovakia--Mine railroads)
(Compressed air)

LEUSHKIN, I.I., inzh.

Determining the speed and angle of turn-of-knife blade air
circuit breakers. Energetik 5 no.9:22-24 S '57. (MIRA 10:10)
(Electric circuit breakers)

LEUSHKIN, I.I., inzh.; GUNDEROV, V.V., master; CHERNYSHKOV, N.A., inzh.

Two attachments to an eight-loop oscillograph. Elek. sta. 35 no.8:75-
76 Ag '64. (MIRA 17:12)

LEUSHKINA, A.M.

Precise method of calculating sun devices for conditions prevailing in
the Golodnaya Steppe. Sbor.nauch.trud.TashNITS no.5:64-69 '63.
(MIRA 18x1)

22972

S/166/61/000/002/003/006
B112/B202

9.4300

AUTHORS: Zvyagin, V. I., Lobanov, Ye. M., Leushkina, G.,
Bartnitskiy, I. N.

TITLE: Anomalously negative current and anomalously positive
photocurrent

PERIODICAL: Izvestiya Akademii nauk UzSSR. Seriya fiziko-matematicheskikh
nauk, no. 2, 1961, 29 - 32

TEXT: The authors observed the following behavior of germanium: If a voltage is applied, the inverse current increases to a certain maximum value after which it slowly decreases to a value near the saturation value of the current. Irradiation with visible light causes an increase of the inverse current up to a certain value which is much higher than the value of the ordinary positive photocurrent. Due to this behavior, the authors use the term "anomalously negative" current and "anomalously-positive" photocurrent in contrast to the ordinary current and photocurrent. An "anomalously positive" current and an "anomalously negative" photocurrent correspond to the "pre-anomalous" behavior. The analysis of experimental
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Anomalously negative...

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data yielded more exact data on the energy scheme of the germanium surface. This scheme is reproduced in Fig. 3.

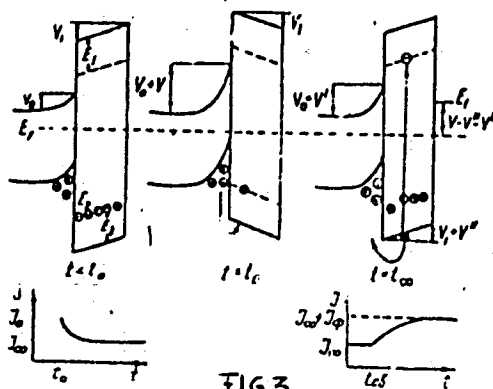


FIG.3

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S/166/61/000/002/003/006
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Anomalous negative...

In equilibrium state, the potential difference between inversion layer with a potential $V_0 + V'$ and the oxidation layer with a potential $V_1 + V''$ corresponds to the external voltage. The authors give empirical formulas for the transition characteristics of the anomalously negative current and the anomalously positive photocurrent:

$$I(t) = I_{\infty} - A_1 \ln(1 - C_1 e^{-\alpha_1 t})$$

characterizes the transition state of the anomalously negative current. I_{∞} is the value of the dark current, A_1 , C_1 , α_1 are constants depending on voltage and temperature. The transition characteristics of the anomalously positive photocurrent is given by the formula:

$$I(t) = I_{\infty} + [I_{ph} + A_2 \ln(1 - C_2 e^{-\alpha_2 t})]$$

where I_{ph} is the value of the stationary photocurrent, A_2 , C_2 , α_2 are constants depending on voltage, temperature, and illumination. The inverse current which appears after the illumination is switched off, has the following transition characteristics:

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B112/B202

Anomalously negative...

$$I(t) = I_{\infty} + I_{ph} - \left[I_{ph}^{1'} + A_3 \ln(1 - C_3 e^{-\alpha_3 t}) \right].$$

There are 3 figures and 2 Soviet-bloc references.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, Academy of Sciences, UzSSR)

SUBMITTED: November 10, 1960

Card 4/4

ACCESSION NO: AP4013023

S/0166/63/000/006/0098/0099

AUTHORS: Leushkina, G. V.; Zvyagin, V. I.; Lobanov, Ye. M.; Dumov, A. G.

TITLE: Fluorescence of silicon carbide

SOURCE: AN UzSSR. Seriya fiziko-matematicheskikh nauk, no. 6, 1963, 98-99

TOPIC TAGS: fluorescence, lattice defect, radiation effect, neutron irradiation, gamma ray irradiation, alpha particle irradiation

ABSTRACT: Samples of SiC produced by vacuum recrystallization were irradiated with neutrons, gamma-rays, and alpha-particles to determine their influence on fluorescence of samples at room temperature. For neutron fluxes of $5 \cdot 10^{11}/\text{cm}^2$ the intensity of fluorescence decreased by a factor of 7 in the short ($\sim 6000 \text{ \AA}$) and a factor of 2 in the longer wave length region of the spectrum. The fluorescence disappeared completely for a neutron flux of $2 \cdot 10^{17}/\text{cm}^2$. No significant difference was noted with or without cadmium filters, indicating that the effect is primarily due to fast neutrons. Irradiation of the samples with gamma rays of Co^{60} produced no noticeable change in intensity of fluorescence for doses of $5 \cdot 10^{17}$ photons/ cm^2 , and a slight decrease for doses of $10^{19}/\text{cm}^2$. Likewise, alpha

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ACCESSION NO: AP4013028

particles from a polonium source with a flux of $3 \cdot 10^8/\text{cm}^2$ had no effect on the intensity. No change was noted after reducing the samples to a powder. From these results it is concluded that the fluorescence of SiC is not related to superficial lattice defects. Orig. art. has: 1 diagram.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics AN UzSSR)

SUBMITTED: 02Apr63

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: MA, PH

NO REF SOV: 002

OTHER: 001

Card 2/2

L 45321-66 EWP(e)/EWI(m)/EWT(t)/ETI IJP(e) JD/JG/WH
ACC NR: AP6024201 SOURCE CODE: UR/0075/66/021/007/0867/0870

AUTHOR: Lobanov, Ye. M. ; Dutov, A. G. ; Leushkina, G. V. 42
B

ORG: Institute of Nuclear Physics, Academy of Sciences Uzbek SSR, Tashkent
(Institut yadernoy fiziki AN UzSSR)

TITLE: Determination of ²¹dysprosium in samples of ²¹yttrium oxide and ferrite ²¹
garnets by a method of radioactivation ¹⁹

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 7, 1966, 867-870

TOPIC TAGS: dysprosium, radioactivation method, yttrium oxide, ferrite, garnet,
YTTRIUM COMPOUND, CHEMICAL DETECTION

ABSTRACT: A method has been developed for determining dysprosium in samples
of yttrium oxide and ferrite garnets using the isomer ^{165m}Dy with a half-life of
1.3 min. The sensitivity of determination is 10⁻⁴ to 10⁻⁵% of Dy. The mean
experimental error is 9% on condition that intervals between measurements are
strictly maintained. Orig. art. has: 2 figures and 1 table. [Based on authors'
abstract] [KP]

SUB CODE: 0720/ SUBM DATE: 20 Jan 65/ ORIG REF: 002/ OTH REF: 004/

Card 1/1 njs

UDC: 543.53

VLASYUK, Petr Antipovich, akademik, zasl. deyatel' nauki USSR; PROTSENKO, D.P., doktor biolog. nauk, prof., otv. red.; LEUSKIY, A.V. [Leus'kyi, A.V.], red.; MATVIICHUK, O.A., tekhn. red.

[Mineral fertilizers with trace elements] Mineral'ni dobryva z mikroelementamy. Kyiv, 1961. 49 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrain's'koï RSR. Ser.5, no.16)
(MIRA 14:11)

1. Chlen-korrespondent Ukrainskoy Akademii sel'skokhozyaystvennykh nauk (for Protsenko).
(Fertilizers and manures) (Trace elements)

ISAYEV, Ye.I.; LEUSOV, Yu.I.; OLEKSEKO, V.V.; LAPITSKIY, V.I., prof.
nauchnyy rukovoditel' raboty.

Using exothermic ferromanganese in the manufacture of medium-
manganese steel. Izv. vys. ucheb. zav.: Chern. met. 7 no.12:
36-40 '64 (MIRA 18:1)

1. Dnepropetrovskiy metallurgicheskii institut.

LAPITSKIY, V.I., doktor tekhn. nauk [deceased]; LEUSOV, Yu.I.;
ISAYEV, Ye.I., kand. tekhn. nauk; OLEKSENKO, V.V.

Intensification of the process of steel deoxidation. Mez.
i gornorud. prom. no.3:28 My-Je '65. (MIRA 18:11)

YAMPOL'SKIY, Anatoliy Mikhaylovich, inzh.; LEUSKIY, I.F., inzh., retsenzent;
VIACHESLAVOV, P.M., dots., kand. khim. nauk, red.; GRILIKHES, S.Ya.,
kand. tekhn. nauk, red.; VARKOVITSKAYA, A.I., red. izd-va; SOKOLOVA,
L.V., tekhn. red.

[Electroplating with rare and precious metals] Gal'vanotekhnika
dragotsennykh i redkikh metallov. Pod obshchei red. P.M. Viachaslavova.
Moskva, Gos. nauchno-tekhn. izd-vo mashino-stroit. lit-ry, 1958.
41 p. (MIRA 11:9)

(Electroplating)

S/048/62/026/007/017/030
B104/B138

AUTHORS: Vovk, V. N., Goreva, Ye. I., Kulik, S. I., and Leuta, T. M.

TITLE: Experience gained with the operation of two APC-10 (DFS-10) instruments in the Dneprospetsstal' plant

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 7, 1962, 907-913

TEXT: Two DFS-10 quantometers were put into operation in November 1960 for analyzing low- and medium-alloy steels. Rapidity and accuracy were satisfactory as also was the amplifying and recording unit. The following drawbacks were found: (1) As it is not always possible to create the necessary air-conditioning a cooling unit should be fitted. (2) Problems of steel analysis cannot always be solved by low-voltage sparks and arcs. A condensed spark generator should therefore be included. (3) Due to variations in battery voltage, the calibration of the instrument is gone in the course of one day. (4) The F3Y-1 (GEU-1) generator does not provide for continuous operation of the instrument, as repairs take half the time. On medium-alloy steels accuracy of

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S/048/62/026/007/017/030

Experience gained with the operation ... B104/B138

analysis is almost twice that of optical methods, except for Si and Mn, where it is about the same. A 25% staff reduction can be achieved if this instrument is used in quick-analysis laboratories. There are 3 figures and 10 tables.

Card 2/2

VOVK, V.N.; GOREVA, Ye.I.; KULIK, S.I.; LEUTA, T.M.

Experience gained in the use of two DFS-10 apparatus at the
Dneprospetsstal' Plant. Izv. AN SSSR. Ser. fiz. 26 no.7:
907-913 J1 '62. (MIRA 15:8)
(Spectrum analysis—Equipment and supplies)

GOREVA, Ye.I.; KULIK, S.I.; LEUTA, T.M.

Operating experience with the DFS-10 photoelectric apparatus at
the "Dneprospetsstal" plant. Zav.lab. 29 no.11:1393-1395 '63.
(MIRA 16:12)

LEUTA, V.I.

FUKS, S.I., kandidat tekhnicheskikh nauk, dotsent; BRAUN, M.P., doktor tekhnicheskikh nauk, redaktor; ~~LEUTA, V.I.~~ inzhener, redaktor; ~~MUMENSKIY, Ya.V.~~, tekhnicheskiy redaktor

[Heat treatment of cast iron] Termicheskaya obrabotka chuguna.
Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954.
144 p. (MIRA 8:3)

(Cast iron) (Metals—Heat treatment)

KORENYAKO, Aleksandr Stepanovich; KREMENSHTEYN, Lev Issakovich; PETROVSKIY, Sergey Dmitriyevich; OVSIYENKO, Grigoriy Mikhaylovich; BAKHANOV, Vasilii Yefimovich; LEUTA, Y.I., inzh., red.; RUDENSKIY, Ya.V., tekhn.red.

[Theory of mechanisms and machines; manual for the course in designing] Teoriia mekhanizmov i mashin; rukovodstvo po kursovomu proektirovaniu. Pod red. A.S.Koreniako. Izd.2., dop. i perer. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1956. 206 p. (MIRA 12:3)

(Mechanical engineering)

(Machinery)

KURMENDASH, Rostislav Stefanovich; RADCHIK, A.S., dots., kand. tekhn. nauk,
retsenzent; LEUTA, V.I., inzh., red.; HUDENSKIY, Ya.V., tekhn.
red.

[Construction of springs] Konstruirovaniye prushin. Kiev, Gos.
nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 106 p.
(Springs (Mechanism)) (MIRA 11:8)

KOMAROV, Mikhail Stepanovich, prof., doktor tekhn. nauk.; BROVDO, B.Ye., dots.,
kand. tekhn. nauk, retsenzent.; LEUTA, V.I., inzh., red.

[Determining rated loads of industrial machinery and mechanical
devices] Opređenje raschetnykh nagruzok proizvodstvennykh
mekhanizmov i mashin. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, 1958. 141 p. (MIRA 11:11)
(Machinery--Tables, calculations, etc.)

PARAMONOVA, Zoya Alekseyevna; STAROSEL'SKIY, A.A., dotsent, retsenzent;
LEUTA, V.I., inzh., red.; RUDENSKIY, Ya.V., tekhn.red.

[Designing shafts and axles] Konstruirovaniye valov i osei.
Kiev, Gos. nauchno-tekhn. issledovaniya mashinostroyeniya, 1958.
142 p. (MIRA 12:5)

(Axles)

(Shafting)

BOGDANOVICH, Leonid Boleslavovich; BASHTA, T.M., prof., doktor tekhn. nauk,
retsensent; LEUTA, V.I., inzh., red.; HUDENSKIY, Ya.V., tekhn. red.

[Hydraulic mechanisms for translational motion; designs and
construction] Gidravlicheskie mekhanizmy postupatel'nogo dvi-
zheniya; skhemy i konstruktsii. Kiev, Gos. nauchno-tekhn.
izd-vo mashinostroit. lit-ry, 1958. 180 p. (MIRA 11:10)
(Hydraulic machinery)

AL'SHITS, Isaak Yakovlevich, kand.tekhn.nauk; VERZHBITSKIY, Nikolay
Fedorovich, kand.tekhn.nauk; ZOMMER, Eduard Feliksovich, kand.
tekhn.nauk; RADCHIK, V.S., kand.tekhn.nauk, retsenzent;
KUKIBNYY, A.A., kand.tekhn.nauk, red.; LEUTA, V.I., inzh.,red.

[Sliding bearings] Opory skol'shenia. Kiev, Gos.nauchno-tekhn.
izd-vo mashinostroit. lit-ry, 1958, 195 p. (MIRA 11:12)
(Bearings (Machinery))

MOGIL'NIY, Iona Minayevich, dots., kand. tekhn. nauk; LISITSIN, S.V., inzh.,
retsensent; LEUTA, V.I., inzh., red.; RUDENSKIY, Ya.V., tekhn.
red.

[Mechanical drawing] Tekhnicheskoe cherchenie. Izd. 5., perer. i
dop. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry,
1958. 391 p. (MIRA 11:9)

(Mechanical drawing)

BRISTOL', Boris Nikolayevich; PREYS, G.A., kand.tekhn.nauk, retsenzent;
SIVOY, A.V., dotsent, retsenzent; OLEYNIK, N.V., dotsent, red.;
LEUTA, V.I., red.

[Designing attachments for machine tools] Konstruirovaniye pri-
sposoblenii dlia metallorazhushchikh stankov. Moskva, Gos.nauchno-
tekhn.izd-vo mashinostroit.lit-ry, 1959. 238 p. (MIRA 13:3)
(Machine tools--Attachments)

BONDAR', Mikhail Pavlovich; LOPATA, Aleksandr Yakovlevich; ORLIKOV,
Mikhail L'vovich; KUPFURSKIY, I.I., inzh., retsenzent; KORSHUNOV,
V.V., retsenzent; LEUTA, V.I., inzh., red.; SOROKA, M.S., red.

[Automatic and semiautomatic lathes] Tokarnye avtomaty i polu-
avtomaty. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit.lit-ry.
1959. 450 p. (MIRA 12:5)

(Lathes)

KHAYMOVICH, Yefren Moyseyevich, prof., doktor tekhn.nauk; VLADZIYEVSKIY,
A.P., doktor tekhn.nauk, retsenzent; KARLEVITS, V.Ya., inzh.,
retsenzent; ~~SEUTA~~, Y.I., inzh., red.; SOROKA, M.S., red.

[Hydraulic drives and hydraulic control of machine tools] Gidro-
privody i gidroavtomatika stankov. Izd.2., perer. i dop. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 553 p.
(MIRA 12:12)

(Machine tools--Hydraulic driving)
(Hydraulic control)

VOYEVODSKIY, Sergey Alekseyevich, inzh.; KHASKIN, Abram
Mikhailevich, inzh.; KRASNITS, Zyama Yakovlevich, inzh.;
ALENICHEVA, Ye.A., inzh., retsenzent; ZHAVORONKOVA, N.N.,
inzh., retsenzent; KYUN, S.A., kand. tekhn. nauk,
retsenzent; PUCHKO, N.F., inzh., retsenzent; UMANOV, I.I.,
inzh., retsenzent; LEUTA, V.I., inzh., retsenzent

[Course in mechanical drawing for correspondence technical
schools] Kurs chercheniia dlia znachrykh tekhnikumov. Kiev,
Tekhnika. Pt.2. 1965. 319 p. (MIRA 18:8)

COUNTRY : USSR
CATEGORY : Cultivated Plants. Grains. M
ABST. JOUR. : RZBiol., No.21, 1958, No. 95903
AUTHOR : Lentin, P.S.
INST. : Voronezh Agric. Inst.
TITLE : Experiments in Planting Winter Crops after
an Occupied Fallow and Non-Fallow Preceding
Crops
ORIG. PUB. : Zap. Voronezhsk. s.-kh. in-ta, 1957, 27, No.
2, 231-238
ABSTRACT : No abstract

CARD: 1/1

L 13663-63

ENP(j)/ENT(m)/BDS AFFTC/ASD Po-4 RM

ACCESSION NR: AP3001429

5/0138/63/000/004/0021/0022

AUTHOR: Yukel'son, I. I.; Slukin, A. D.; Lautina, V. P.

TITLE: Compatibility of arylenealkyl polymers with natural and synthetic rubbers.

SOURCE: Kauchuk i rezina, no. 4, 1963, 21-22

TOPIC TAGS: arylenealkyl polymer, natural rubber, synthetic rubber, plasticizer, carbochain polymer

ABSTRACT: The present work was undertaken for the purpose of locating plasticizers which would not impair the strength of rubbers. To this end arylenealkyl polymers were chosen which were of linear structure and in a liquid state, such as polyphenyleneethyl, polyethylphenyleneethyl, polychlorophenyleneethyl, and polyxylileneethyl. The compatibility of these with rubbers was determined by the kinetics of their swelling, which was estimated gravimetrically. The rubbers under test were the NK, the SKS-30 ARM, and the SKI-3. The kinetics of their compatibility with the oil FM-6 were taken as a standard. The compatibility of all arylenealkyl polymers, with the exception of the chloro-derivative, was far superior to that of the oil FM-6. The low polarity of the former and the high polarity of the chloro-derivative may have been responsible for the

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ACCESSION NR: AP3001429

difference. Rubbers SKI-3 and SKS-30 ARH showed the best compatibility with polyethylphenyleneethyl of molecular weight 1400 and with polychlorophenyleneethyl of molecular weight 1870, while natural rubber was most compatible with polyphenyleneethyl of molecular weight 1580. G. D. Alekseyeva participated in the determination of the decomposition temperatures of the polymers. Orig. art. has: 1 formula, 2 charts, and 1 table.

ASSOCIATION: Voronezhskiy tekhnologicheskii institut (Voronezh Technological Institute)

SUBMITTED: 00

DATE ACQ: 30May63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 000

Card 2/2

LEUTSKAYA, Z. K.

USSR/ Chemistry - Biochemistry

Card 1/1 Pub. 22 - 31/54

Authors : Leutskiy, K. M., and Leutskaya, Z. K.

Title : Relation between the vitamin A and carotene content in the organism and presence of albumina in the food

Periodical : Dok. AN SSSR 100/3, 519-520, Jan 21, 1955

Abstract : Experiments were conducted on white male rats to determine to what extent vitamin A and carotene contents in the animal organism depend upon the albumin content in the food. The results obtained are tabulated. Four references: 2 USSR, 1 Canadian and 1 USA (1934-1952). Table.

Institution : State University, Chernovtsy

Presented by: Academician A. I. Oparin, November 11, 1954

LEUTSKAYA, Z.K.

LEUTSKAYA, Z.K.

Effect of vitamin A on the nucleic acid content and on protein synthesis in the organism [with summary in English]. Biul. eksp. biol. i med. 44 (MIRA 11:2) no.10:57-59 0 '57.

1. Iz kafedry biokhimii zhivotnykh (zav. - deystvitel'nyy chlen AMN SSSR S.Ye. Severin) Moskovskogo gosudarstvennogo ordena Lenina universiteta imeni M.V. Lomonosova (rektor - akademik I.G. Petrovskiy) Predstavlena deystvitel'nyy chlenom AMN SSSR S.Ye. Severin.

(NUCLEIC ACIDS, metabolism,

eff. of vitamin A (Rus))

(SERUM ALBUMIN,

eff. of vitamin A on synthesis (Rus))

(VITAMIN A, effects,

on nucleic acid content & serum albumin synthesis (Rus))

LEUTSKAYA, L.K.

Electrophoretic study of serum proteins in developing
immunity to *Ascaridia* eggs. Trudy Gruz. Lab. 22:128-130 '62.
(MIRA 17:10)

LEUTSKAYA, Z.K.

Content of various forms of vitamin A in the liver and liver mitochondria immunized with an antigen from *Ascaridia galli* of chicks deprived of vitamin A. Dokl. AN SSSR 159 no.2: 464-465 N '64. (MIRA 17:12)

1. Predstavleno akademikom K.I. Skryabinym.

LEUTSKAYA, Z.K.

Level of antibodies in chicks suffering from vitamin A deficiency and immunized with an antigen from *Ascaridia galli* nematodes.
Dokl. AN SSSR 159 no.4:938-940 D '64 (MIRA 18:1)

1. Gel'mintologicheskaya laboratoriya AN SSSR i Nauchno-issledovatel'skaya laboratoriya vitaminov Chernovitskogo gosudarstvennogo universiteta. Predstavleno akademikom K.I. Skryabinym.

LEUTSKAYA, Z. K., Cand of Bio Sci -- (diss) "Study of the Interconnection
and Metabolism of Vitamin A and Protein." Mos, 1959, 15 pp (Moscow
State Univ 1st Lomonosov, Chair of the Biochemistry of Animals)
(KL, 1-60, 120)